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| 10/589,436 | 04/25/2007 | Naomitsu Nishihata | NISH.0006 | 9872 |

7590 04/15/2009
Stanley P. Fisher
REED SMITH LLP
Suite 1400
3110 Fairview Park Drive
Falls Church, VA 22042

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| EXAMINER |
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FERGUSON, LAWRENCE D

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| ART UNIT | PAPER NUMBER |
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1794

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04/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---|---|--|
| Office Action Summary | Application No. 10/589,436 | Applicant(s) NISHIHATA ET AL. | |
| | Examiner Lawrence D. Ferguson | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/17/08;11/15/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Election

1. This action is in response to the election filed January 23, 2009.
Applicant's election *without traverse* of (Group I) Claims 1-18 is acknowledged, rendering claims 1-18 pending with (Group II) Claims 19-20 withdrawn as a non-elected invention.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The references disclosed within the information disclosure statements (IDS) submitted on September 17, 2008 and November 15, 2006, have been considered and initialed by the Examiner.

Suggestion

4. In claim 4, the phrase, "170°" is not consistent with claim 2, from which it depends. Examiner suggests amending the phrase from "170°" to --170°C-- to maintain

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consistency with the claim language and to make it clear that the glass transition temperature is measured in Celsius degrees.

Obvious Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-5 and 12-18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No.

7,198,734. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both include a resin composition comprising a thermoplastic resin in overlapping percentage amounts, a carbon precursor in overlapping percentage amounts, having a volume resistivity of 10^2 to 10^{10} Ωcm and a

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conductive filler having overlapping percentage amounts and a volume resistivity lower than $10^2 \Omega\text{cm}$, where U.S. Patent No. 7,198,734 teaches the resin composition can be an IC socket, which is interpreted as a machining part. Although U.S. Patent No. 7,198,734 does not explicitly teach the composition having a thickness or diameter, it would have been obvious to one of ordinary skill in the art to make the composition with the limitation of the thickness since the thickness directly affects the durability of the material and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980).

Claim Rejections – 35 USC § 103(a)

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishihata et al. (WO 00/343369).

Nishihata discloses a resin composition comprising 40 to 98.5 wt% of a thermoplastic resin, 1 to 40 wt% of a carbon precursor having a volume resistivity of 10^2 to $10^{10} \Omega\text{cm}$ and 0.5 to 30 wt% of at least one conductive filler having a volume resistivity lower than $10^2 \Omega\text{cm}$ (page 13, lines 13-26 and page 14, lines 1-20). Nishihata

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further discloses the composition can be formed or molded into various shapes and can be applied to a wide variety of fields including the field of machining (page 29, lines 13-25 and page 31, lines 11-20). Because the reference discloses the composition can be formed or molded into various shapes in the field of machining, it is expected for the various shapes to include a stock shape for machining.

Although Nishihata does not disclose the exact thickness of the article, because the composition can be formed into various shapes, it would have been obvious to one of ordinary skill in the art for the article to be formed or molded into a shape having a thickness exceeding 3 mm. Given the teachings of Nishihata, including a composition that can be formed into various shapes, it would have been obvious to one of ordinary skill in the art, to determine the optimum thickness of the molded article. It also would have been obvious to one of ordinary skill in the art to optimize the thickness of the article, which affects the durability of the article, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980), as in claim 1.

Concerning claims 2-4, the thermoplastic resin can be a thermoplastic polyester, such as polybutylene terephthalate or polyethylene terephthalate (page 14, lines 1-10), which instant claim 3 defines as having a melting point of at least 220°C and also discloses the thermoplastic polyester can be poly(phenylene ether) (page 14, lines 1-11) which instant claim 4 defines as having a glass transition temperature of at least 170°C.

Concerning claim 5, the thermoplastic resin can be a poly(ether ether ketone) (page 14, lines 1-14).

Concerning claim 6, the thermoplastic resin can be a mixture of at least two thermoplastic resins (page 14, lines 1-20 and page 15, lines 13-14).

Concerning claims 7-8, the synthetic resins, such as poly(ether ether ketone) and poly(ether imide) can be combined (page 14, lines 13-17 and page 15, lines 13-14) which is interpreted as being combined in a ratio of 50:50.

Concerning claim 9, the synthetic resins, such as poly(phenylene sulfide) and poly(ether imide) can be combined (page 14, lines 13-17 and page 15, lines 13-14) which is interpreted as being combined in a ratio of 50:50.

Concerning claim 10, the synthetic resins, such as poly(ether ether ketone) and poly(phenylene sulfide) can be combined (page 14, lines 13-17 and page 15, lines 13-14) which is interpreted as being combined in a ratio of 50:50.

Concerning claim 11, the synthetic resins, such as poly(ether ether ketone), poly(phenylene sulfide) and poly(ether imide) can be combined (page 14, lines 13-17 and page 15, lines 13-14) which is interpreted as being combined in a ratio of 50:50, where poly(ether ether ketone) and poly(phenylene sulfide) have a combined ratio in comparison to poly(ether imide) due to Nishihata discloses the resins can be in any combination.

Concerning claim 12, the carbon precursor can have a carbon content of 80 to 97 wt% (page 16, lines 20-23).

Concerning claim 13, carbon fiber can be used as a conductive filler (page 20, lines 1-8).

Concerning claim 14, the carbon fiber is a polyacrylonitrile or pitch based carbon fiber (page 20, lines 1-8).

Concerning claim 15, Nishihata discloses a resin composition comprising 40 to 98.5 wt% of a thermoplastic resin, 1 to 40 wt% of a carbon precursor and 0.5 to 30 wt% of at least one conductive filler (page 13, lines 13-26 and page 14, lines 1-20).

Concerning claim 16, the composition has a surface resistivity of 105 to 1012ohms (page 26, lines 17-19).

Concerning claims 17-18, Nishihata discloses the article can be molded into a plate (page 38, lines 10-21). Although Nishihata does not disclose the exact thickness of the article, because the composition can be formed into various shapes, it would have been obvious to one of ordinary skill in the art for the article to be formed or molded into a shape having a thickness exceeding 3 mm. Given the teachings of Nishihata, including a composition that can be formed into various shapes, it would have been obvious to one of ordinary skill in the art, to determine the optimum thickness of the molded article. It also would have been obvious to one of ordinary skill in the art to optimize the thickness of the article, which affects the durability of the article, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 USPQ 215 (CCPA 1980).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,545,081 teaches a resin composition comprising 40 to 98.5 wt% of a thermoplastic resin, 1 to 40 wt% of a carbon precursor having a volume resistivity of 10^2 to 10^{10} Ωcm and 0.5 to 30 wt% of at least one conductive filler having a volume resistivity lower than 10^2 Ωcm (page 13, lines 13-26 and page 14, lines 1-20). The reference does not teach the resin composition having a thickness or diameter exceeding 3 mm.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample, can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lawrence Ferguson/
Patent Examiner, Art Unit 1794

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794